

REMARKS

In the Office Action, dated March 12, 2003, the Examiner states that Claims 1-10 are pending. Claims 1-6, 8 and 10 are rejected and Claims 7 and 9 are objected to. By the present Amendment, Applicant amends the claims and the abstract.

In the Office Action, the abstract is objected to for being too long in length. The Applicant has amended the abstract to reduce the number of words to less than 150.

In the Office Action, Claim 7 is objected to for a minor informality. This objection has been attended to in amended Claim 6.

In the Office Action, Claims 2 and 10 are rejected under 35 U.S.C. §112, second paragraph as indefinite. Applicant has cancelled Claim 2 and amended Claim 10 to depend from Claim 6 to overcome these rejections.

In the Office Action, Claims 1 and 2 are rejected under 35 U.S.C. §102(b) as anticipated by Roeder (US 3,809,945). Claims 1, 3 and 4 are rejected under 35 U.S.C. §102(b) as anticipated by Godfrey et al. (US 4,109,177). Claims 6 and 8 are rejected under 35 U.S.C. §102(e) as anticipated by Tseng et al. (US 5,990,607). Claim 5 is rejected under 35 U.S.C. §103(a) as obvious over Godfrey et al. in view of Park (US 6,304,025). Claim 10 is rejected under 35 U.S.C. §103(a) as obvious over Tseng et al. in view of Park. However, Claims 7 and 9 are indicated as containing allowable subject matter.

The Applicant has cancelled Claims 1-5 and 7, and amended Claim 6 to incorporate the features of Claim 7 which were indicated as allowable. The remaining claims depend from Claim 6. Thus, the amended claims are considered by the Applicant to overcome the stated rejections.

In light of the foregoing response, all the outstanding objections and rejections have been overcome. Applicant respectfully submits that this application should now be in better condition for allowance and respectfully requests favorable consideration.

Respectfully submitted,

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Date

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DOCKET: CU-2620

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT: Yoshinori HIROBE et al. )  
SERIAL NO: 09/930,321 ) Group Art Unit: 2879  
FILED: August 15, 2001 )  
TITLE: SHADOW MASK ) Examiner: G. Zimmerman

THE COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, VA 22313-1450

**AMENDED CLAIMS**

1. (cancelled)
2. (cancelled)
3. (cancelled)
4. (cancelled)
5. (cancelled)
6. (currently amended) A shadow mask which has a front surface and a rear surface to which through holes are formed in a predetermined arrangement, each of said through holes having a rear surface side hole portion through which an electron beam enters and a front surface side hole portion through which the electron beam outgoes so as to form a beam spot having a predetermined shape on a surface to be irradiated, wherein the front surface side hole portion of the through hole formed at a peripheral portion of the shadow mask has substantially an elliptical shape in which an opening hole width in a direction normal to a virtual line extending from a center of the shadow mask is made smaller than that of the front surface side hole portion of the through hole formed at a central portion thereof;

wherein the opening hole width of the front surface side hole portion of the through hole formed at the peripheral portion of the shadow mask has a size not

less than 1.46 times a thickness of the shadow mask.

7. (cancelled)
8. (original) A shadow mask according to claim 6, wherein the opening hole widths of all the front surface side hole portions including of the front surface side hole portions at the peripheral portion are continuously changed at a predetermined rate of change in accordance with a distance from the central portion of the shadow mask.
9. (original) A shadow mask according to claim 6, wherein opening hole widths of all the front surface side hole portions including the front surface side hole portions at the peripheral portion are substantially the same at the front surface side hole portions at the outermost peripheral portion of the shadow mask and the opening hole widths of the front surface side hole portions of the through holes formed between the through holes formed at the central portion of the shadow mask and the through holes formed to the outermost peripheral portion are continuously changed at a predetermined rate of change.
10. (currently amended) A shadow mask according to ~~claim 4~~ claim 6, wherein said shadow mask is mounted to a flat-type cathode ray tube.

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AMENDED ABSTRACT

A shadow mask is formed with through holes in a predetermined arrangement or pattern. Each of the through holes has a rear surface side hole portion through which an electron beam enters and a front surface side hole portion through which the electron beam outgoes so as to form a beam spot having a predetermined shape on a surface to be irradiated. The A front surface side hole portion of the through hole formed at a peripheral portion of the shadow mask has an opening hole area smaller than that of the front surface side hole portion of the through hole formed at a central portion thereof. The front surface side hole portion of the through hole formed at a peripheral portion of the shadow mask ~~may have~~ has substantially an elliptical shape having an opening hole width in a direction normal to a virtual line extending from a center of the shadow mask, and the width is made smaller than that of the front surface side hole portion of the through hole formed at a central portion thereof.